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Original

English/German/French/Italian

Operating Instructions

STEREO TURNTABLE

PL-930

WE

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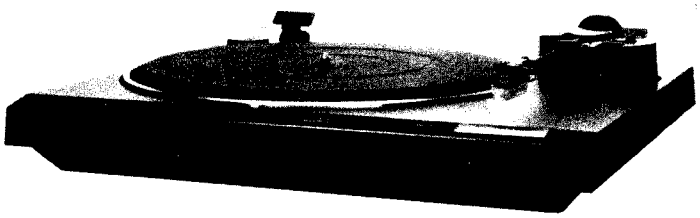

ENGLISH

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FRANÇAIS

ITALIANO

PIONEER®

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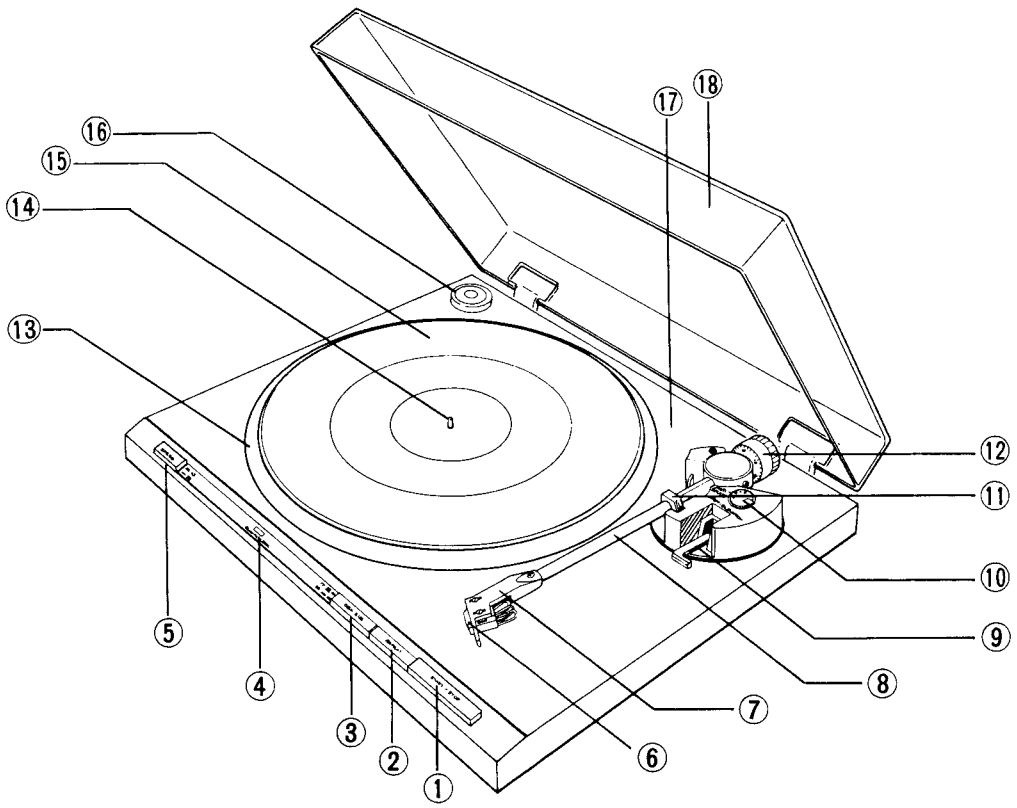
IMPORTANT

To prevent electric shock, do not remove cover. No user serviceable parts inside, refer servicing to qualified service personnel.
Always disconnect all the equipment from the mains supply when disconnecting the signal leads. The power cord should be connected last, make sure that the power switch is off.
Unplug the set from the wall socket when it is not to be used for an extended period of time.

PANEL FACILITIES



① START/STOP switch
Depress this switch when starting auto play or when stopping play. (For details, refer to page 7 or 8.)

② REPEAT switch
Set this switch for repeat play. (For details, refer to page 8.)

③ DISC SIZE switch
Set this switch in accordance with the size of the record which is to be played.
[7" 17] (released position): For 17 cm EPs
[12" 30] (depressed position): For 30 cm LPs

④ Quartz lock indicator
This lights when the platter is rotating at exactly 33-1/3 or 45 revolutions per minute.

⑤ SPEED switch
Set this switch in accordance with the speed of the record which is to be played.
[33] (depressed position): For 33-1/3 rpm records
[45] (released position): For 45 rpm records

⑥ Cartridge (PC-3MC)

⑦ Headshell

⑧ Tonearm

⑨ ARM ELEVATION lever
Operate this lever when starting manual play or when temporarily suspending play. (For details, refer to page 8.)

⑩ ANTI-SKATE control
This is rotated when performing the anti-skating adjustment. (For details, refer to page 5.)

⑪ Arm rest
This serves to hold and clamp the tonearm. When moving the tonearm, release the clamp. (For details, refer to page 5.)

⑫ Tracking force adjustment weight
This is used when adjusting the tracking force. (For details, refer to page 5.)

⑬ Platter

⑭ Platter mounting shaft

⑮ Rubber mat

⑯ EP adapter
This is used when playing records without a "middle."

⑰ Cabinet

⑱ Dust cover

ENGLISH

OPERATIONS BEFORE USE

(Before using your turntable, carry out the instructions in step 1 through step 4.)

STEP 1 Assembling the Turntable

1 Removing the dust cover

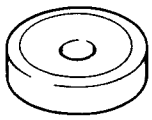
1. Open the dust cover as far as it will go.
2. Hold both sides of the dust cover and remove it from the cabinet by pulling it up.

NOTE:

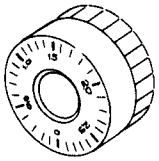
Take care not to mark or scratch the dust cover which you have now removed.

2 Checking the accessories

The accessories are housed in the polystyrene cushions which are used to package the turntable proper.



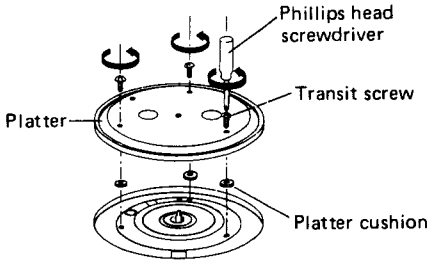
EP adapter
This is used to play records without a "middle."



Tracking force adjustment weight
This is mounted onto the end of the tonearm.

3 Removing the transit screws

Using a Phillips head screwdriver, rotate the transit screws (3) in the direction of the arrow in the figure and remove the platter and the platter cushions.

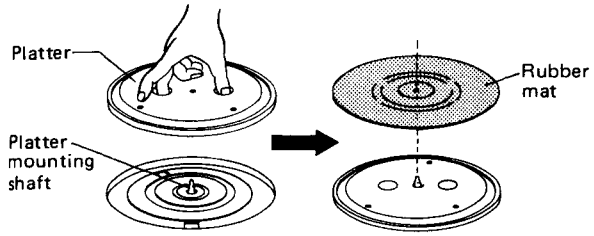


NOTE:

- *The turntable will not operate unless these screws are removed.*
- *Keep the screws and cushions in a safe place since they are required when transporting the turntable from place to place.*

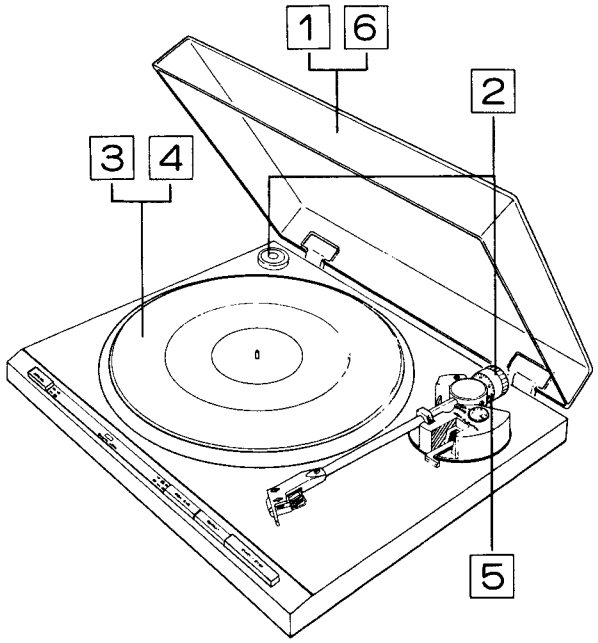
4 Mounting the platter and rubber mat

1. Place the platter over the platter mounting shaft.
2. Place the rubber mat on top of the platter.



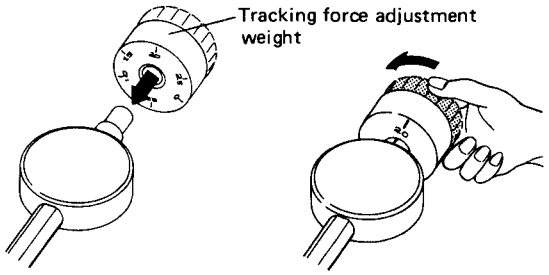
NOTE:

When mounting the platter, take care not to bump it into the platter mounting shaft, the cabinet and the tonearm.



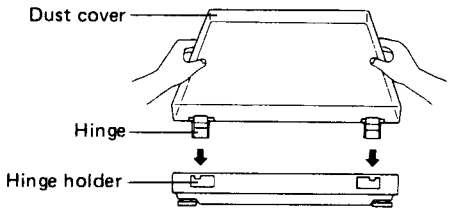
5 Attaching the tracking force adjustment weight

1. Insert the weight over the end of the weight shaft with the scale side turned in front.
2. Push it a short way along the shaft and rotate the weight part (indicated as ▓▓ in figure) in the direction indicated by the arrow for two or three turns.



6 Mounting the dust cover

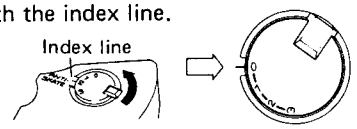
1. Hold both sides of the dust cover and slide the hinges into the cabinet's hinge holders.
2. Push down until the dust cover goes no further.



STEP 2 Adjusting the Tracking Force and Anti-Skating

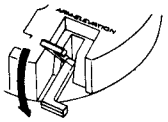
1 Setting the ANTI-SKATE control to [0]

Rotate the control in the direction indicated by the arrow and align [0] with the index line.



2 Setting the ARM ELEVATION lever to DOWN

Pull down the lever toward you.

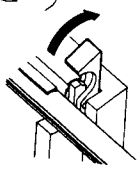


3 Removing the stylus cover

4 Releasing the arm rest.

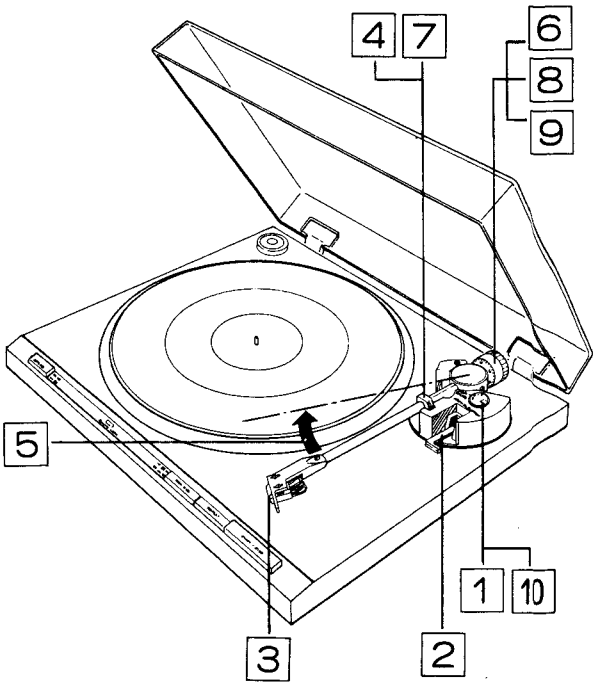
Move the arm rest in the direction of the arrow by hand.

NOTE:
Hold the tonearm with your other hand since it may move.



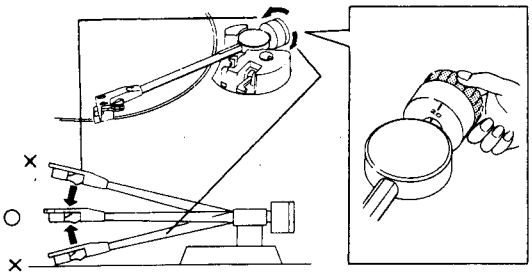
5 Moving the tonearm

Move the tonearm to between the arm rest and platter.



6 Attaining the horizontal balance (make the tonearm parallel)

As shown in the figure, rotate **the weight part** (indicated as ▒▒▒ in figure) of the tracking force adjustment weight in the direction indicated by the arrow and adjust it so that the tonearm remains parallel to the cabinet when it is released.

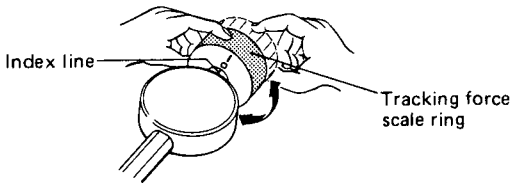


NOTE:
- *Hold the weight part with your other hand to prevent it from rotating with the ring.*
- *Once the weight part has been rotated, attain the horizontal balance again as under section* 6

7 Anchoring the tonearm to the arm rest

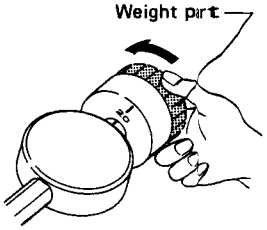
8 Setting the tracking force scale ring to [0]

Rotate only the tracking force scale ring (indicated as ▒▒▒ in figure) of the tracking force adjustment weight in either of the directions shown by the arrows and align [0] with the index line.



9 Adjusting the tracking force

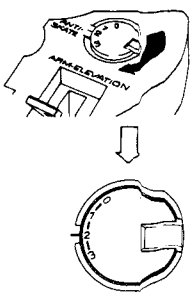
Rotate the weight (indicated as ▒▒▒ in figure) in the direction indicated by the arrow (the tracking force scale ring also rotates together) and align the 2.0 position on the scale ring with the index line.



- One scale unit on the tracking force scale ring is 0.1 g.
- A tracking force of 3 g is applied with every turn of the weight.

10 Adjusting the anti-skating

Rotate the anti-skating control in the direction of the arrow and align the 2.0 point on the control with the index line.

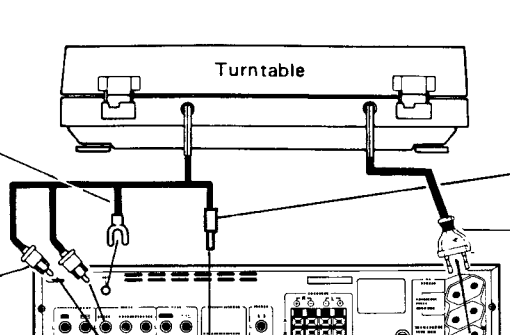


ENGLISH

STEP 3 Connecting the Turntable and Amplifier

Connecting the ground wire
Attach the metal fitting onto the amplifier ground **(GND)** terminal.

Connecting the output cords
Insert the plugs into the amplifiers input **"PHONO"** terminals.
- Connect the white plug to the left **(L)** channel and the red plug to the right **(R)** channel.
- Insert the plugs as far as they will go.



Connecting the auto function cord
When using the stereo amplifier of a PIONEER auto function system (SA-930), connect this cord to the "AUTO FUNCTION" terminal marked PHONO on the amplifier.
NOTE:
When using an amplifier of any other system, it is not necessary to connect this cord.

Connecting the power cord
Connect the power plug to the auxiliary **"AC OUTLET"** on the amplifier or to a household power outlet.

STEP 4 Installing the Turntable

Take note of the following points and install the turntable properly. Find a location which:

- Is horizontal and flat.
- Is characterized by minimal floor vibration or is not affected by any vibrations transmitted.
- Is not affected by high sound pressures or vibrations from the speaker system.
  (Do not install the turntable immediately in front of, or on top of, the speakers.)
- Allows easy operation and gives visible access to the record and stylus.
- Is near to the stereo amplifier.
  (Install the turntable within a range where the connecting cords reach the terminals on the amplifier.)
- Is not directly exposed to direct sunlight or heat from heating appliances.
  (Do not install the turntable near a heater or on a window ledge exposed to the sun.)
- Is not exposed to dust and dirt.
- Is free from damp and moist air.

After having carried out steps [1] through [4], read through the following checkpoints.

Check the tracking force and anti-skating adjustments.

- **The ANTI-SKATE control must be aligned with the same number as the tracking force.**

The following trouble is apparent when the number does not tally with the tracking force:
Too high: The sound is distorted and the tonearm slides toward the outside of the record.
Too low: The tonearm slides toward the inside of the record when the stylus descends onto the record.

- **The tracking force must be adjusted within the correct tracking force range of the cartridge.**

The following trouble is apparent when the tracking force is not properly adjusted:
Excessive tracking force:
The sound is distorted and the cartridge itself touches the record.
Insufficient tracking force:
The sound is distorted and interrupted.

- **The tracking force must be adjusted with the ANTI-SKATE control at [0].**

Unless this control is set to the [0] position, a force is generated by the anti-skating mechanism which pulls the tonearm to the right (toward the arm rest). Therefore, when attaining the horizontal balance, the tonearm is not at rest and so the operation is difficult to perform.
Even at the [0] position there may be some movement. This is due to the increased rotational sensitivity of the tonearm enabling the stylus to trace efficiently the sound grooves on the record, and it does not indicate that there is anything wrong with the turntable.

Check the installation and connections of the turntable

- **Connection must be made to the amplifier's PHONO MM terminals.**
- **When using a cartridge other than that supplied.**

Consult the Operating Instructions of the cartridge and stereo amplifier and proceed.

- **Incorrect connections of installation will lead to trouble**

If the equipment is connected improperly, no sound will be heard. If the output cord plugs are not inserted as far as they will go or if the ground wire is not connected, humming noise will be heard through the speakers.
If the turntable is installed at an angle, the tonearm will slide on the record and the sound will be distorted. If vibrations are transmitted to the turntable, the sound may be discontinuous or it may tremble, and in some cases howl (a prolonged wailing sound from the speakers) may be heard.

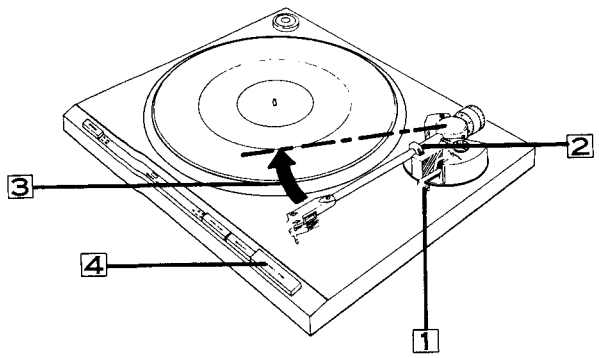
- **The connecting cords should be given some slack**

Check that none of the connecting cords are pulled taut after they have been connected. Tautness may lead to cord disconnections and howl.

RECORD PLAY

When Using the Turntable for the First Time

The turntable may operate unstably due to the vibrations sustained during transportation. Proceed as follows to restore the turntable to its normal working operation. This procedure is observed only once; on other occasions it may be disregarded.



1 Set the ARM ELEVATION lever to the UP position.

2 Release the arm rest.

3 Move the tonearm by hand.

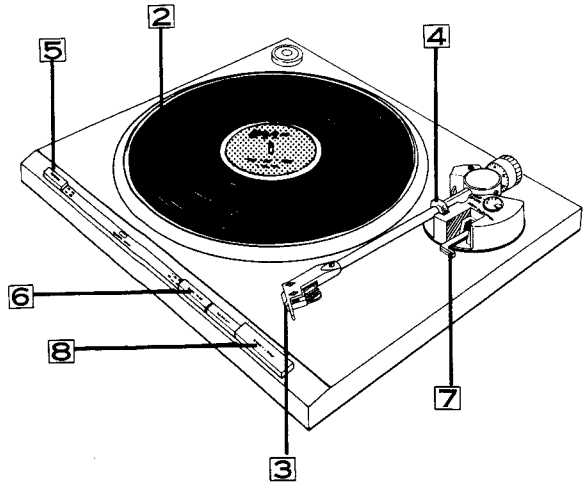
- The platter starts to rotate.
- Release the tonearm after having moved it.

4 Depress the START/STOP switch.

Several seconds after the switch has been depressed, the tonearm returns automatically to the arm rest and the platter stops rotating.

Record Play Procedure

(Auto Play)



1 Set the stereo amplifier up for record play.

Set the amplifier's power switch to ON and set the function selector to the PHONO position.

2 Place the record onto the platter.

3 Remove the stylus cover

4 Release the arm rest

5 Depress the SPEED switch and set the speed:

Depressed position for playing 33-1/3 rpm records
Released position for playing 45 rpm records

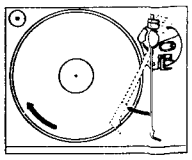
6 Depress the DISC SIZE switch and set the size of the record:

Released position for playing 7" 17 cm records
Depressed position for playing 12" 30 cm records

7 Set the ARM ELEVATION lever to the DOWN position

8 Depress the START/ STOP switch to start record play

Several seconds after this switch has been depressed, the platter starts to rotate and the tonearm automatically moves across to the record. Record play begins.

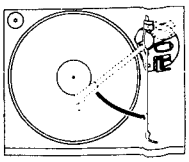


When using a PIONEER auto function system amplifier (SA-930), operating this switch causes the amplifier to switch automatically over to the record play mode.

9 Adjust the volume and tone using the controls on the stereo amplifier

10 Record play ends

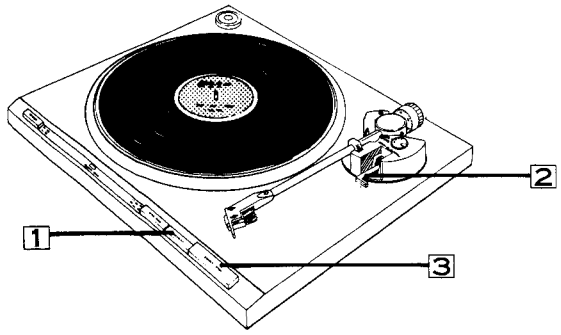
The tonearm automatically returns to the arm rest and the platter stops rotating.



ENGLISH

Repeat Play

Observe the instructions in steps 1 through 6 on the page 7 and then proceed as follows.



How to release repeat play

Depress the REPEAT switch again. Upon completion of record play, the tonearm automatically returns to the arm rest and the platter stops rotating.

1 Release the REPEAT switch

Set the switch to the released position(▬).

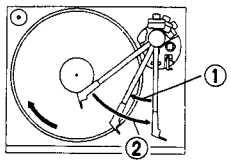
2 Set the ARM ELEVATION lever to the DOWN position

3 Depress the START/STOP switch to start record play

4 Adjust the volume and tone using the controls on the stereo amplifier

5 Record play ends. Play is repeated

Upon completion of record play, the tonearm automatically returns to the first track and play is repeated. This operation continues until the repeat play function is released.

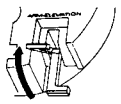


Manual Play

Proceed with manual play in the following circumstances:

- **When starting play at any track except the first.**
- **When the size of the record is not standard which makes auto play impossible.**

1 Set the ARM ELEVATION lever to the UP position



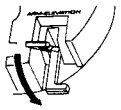
2 Move the tonearm across to the record by hand

Position the tonearm over the spot on the record where play is to begin and then release the headshell.

- The platter starts to rotate.
- The stylus remains floating above the record and so no sound is heard yet.

3 Set the ARM ELEVATION lever to the DOWN position

The stylus now descends onto the record and play begins.



4 Adjust the volume and tone using the controls on the stereo amplifier

(Upon completion of record play, the tonearm returns automatically to the arm rest.)

Temporarily Suspending Play

This can be done in two ways

• Depress the START/STOP switch

Several seconds after this switch is set, the tonearm automatically returns to the arm rest and the platter stops rotating.

NOTE:
If the REPEAT switch is set to the release position, auto play begins again after the tonearm has returned to the arm rest.

• Set the ARM ELEVATION lever to the UP position

The stylus rises from the surface of the record and play stops (but the platter continues rotating).
When the tonearm is returned manually to the arm rest, the platter stops rotating.

NOTE:
After the tonearm has been returned manually to the arm rest, always remember to set the ARM ELEVATION lever to the DOWN position.

Record play precautions

- **When the tonearm does not descend at the proper place on the record**

When during auto play the tonearm does not move as far as the record or if it moves too far and play starts from a position further across the record, refer to "Adjusting the stylus descent position" on page 9 and adjust.

- **When the tonearm does not return automatically**

If a record with a non-standard size is being played, the tonearm may not return even after play or it may return before the completion of play. In cases like this, depress the START/STOP switch and the record play is concluded automatically.

- **Clean the stylus and records before and after play (refer to page 10)**

Dust or dirt on the stylus or records will result in distorted and discontinuous sound.
Remove the dust on the stylus with a soft brush. Use a good-quality record cleaner obtainable from your dealer to remove dust and dirt on your records.

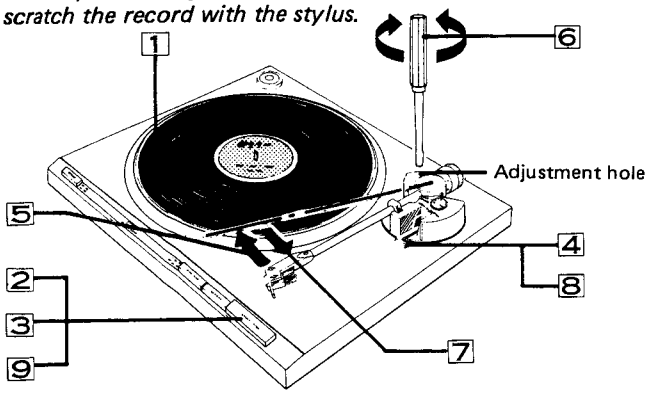
- **Place only one record on the platter at a time**

If two or more records are placed, the angle of the stylus on the record will deviate, resulting in distorted sound.

ENGLISH

Adjusting the Stylus Descent Position

Proceed as follows when the stylus does not descend in the proper position on the record during auto play. While performing the adjustment, take care not to scratch the record with the stylus.



1 Place a 30 cm record on the platter.

2 Depress the STAR/STOP switch and start auto play.

Check the direction and amount of stylus deviation (how many millimeters toward the inside or outside of the record's lead-in groove).

3 Depress the START/STOP switch and return the tonearm to the arm rest.

4 Set the ARM ELEVATION lever to the UP position.

5 Move the tonearm across to the outside edge of the record manually.

6 Rotate the screw with a small screwdriver in accordance to the direction of the deviation observed in step 2.

- Every semi-turn of the screw corrects the stylus descent position by about 18 mm.
- Rotate the screw clockwise if the stylus descends on the outside of the proper position.
- Rotate the screw counerclockwise if the stylus descends on the inside of the proper position.

7 Return the tonearm to the arm rest manually.

8 Set the ARM ELEVATION lever to the DOWN position.

9 Depress the START/STOP switch and check that the adjustment has been performed properly.

Repeats steps 3 through 9 if the stylus still deviates.

MAINTENANCE

Replacing the Stylus

- **The service life of the stylus on the cartridge supplied ranges from 800 to 1,000 hours**
  (If the stylus is used for 1 or 2 hours every day, it will last for one or two years.)

Using a worn or damaged stylus can damage the record and distort the sound reproduced. Remember to replace the stylus at the earliest possible date.

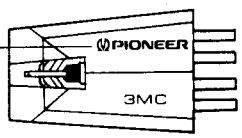
- **Obtain the PN-3MC replacement stylus from the PIONEER dealer from whom you purchased the unit**

The cartridge mounted on this unit was developed by PIONEER. Only a specially designed replacement stylus may be used and this may be obtained from your PIONEER dealer.

- **Always use a PIONEER replacement stylus and no other**

Using a replacement stylus made by another company will make it impossible for PIONEER to guarantee that there will be no resulting deterioration in quality or malfunctions.

PIONEER'S company logo is stamped on all the company's genuine replacement styli.

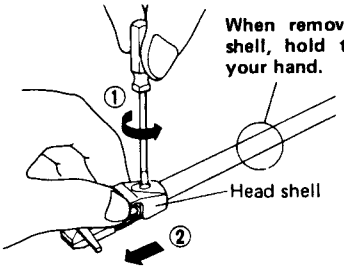


Replacing the stylus procedure

1. Anchor the tonearm to the arm rest

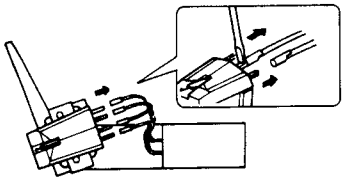
2. Remove the headshell from the tonearm

Use a small screwdriver to rotate the anchoring screw in the direction indicated by the arrow to remove the headshell.



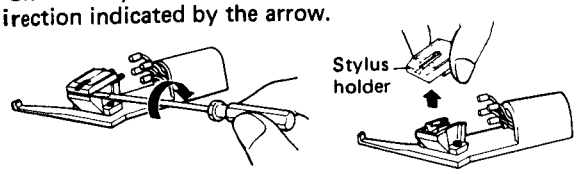
3. Disconnect the leads from the cartridge

Use a small screwdriver or tweezers to disconnect the leads.

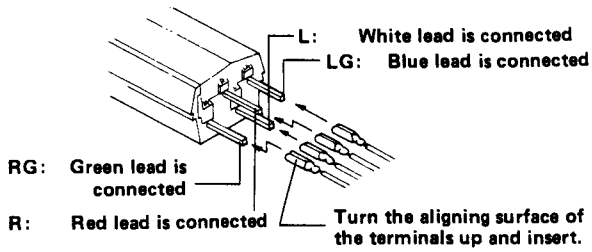


4. Remove the stylus from the cartridge

Insert a small screwdriver into cartridge's slot and rotate as shown in the figure. (The stylus holder will rise slightly.) Hold the stylus holder and pull the stylus gently in the direction indicated by the arrow.

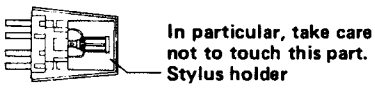


5. Connect the leads to the new stylus holder


L: White lead is connected
LG: Blue lead is connected
RG: Green lead is connected
R: Red lead is connected
Turn the aligning surface of the terminals up and insert.

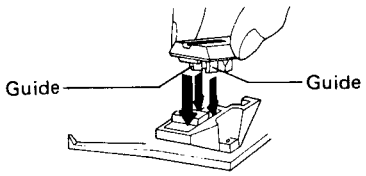
NOTE:

Take care not to touch the stylus of the new stylus holder, the internal coil and the leads.



6. Attach the new stylus holder to the cartridge

Align the holder with the guides and press onto the cartridge until it clicks into place.



7. Mount the headshell onto the tonearm

Follow the procedure of section 2 in reverse. Push the headshell as far as it will go and then secure it.

Maintaining the turntable

- **When the cabinet is dirty or dusty**

Use a polishing cloth or a dry soft cloth to clean off the dirt and dust.

- **When the cabinet is stained**

Dip a soft cloth into neutral detergent diluted with five or six times the amount of water, wring the cloth out and clean off the stains. Next, wipe off all the remaining moisture with a dry soft cloth.

- **Do not use chemicals or furniture wax**

Never use furniture wax, cleaners, thinners or benzene for cleaning since these will mar and discolor the surface finish of the cabinet.

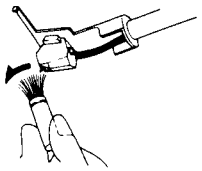
- **Do not spray with insecticides**

If insecticide sprays are allowed to come into contact with the surface of the cabinet, the surface may be discolored and the finish spoiled.

Maintaining the stylus

- **Use a soft brush**

As shown in the figure, move the brush toward you to clear off the dust and dirt. Do not use your finger since this will damage the stylus.



- **When the dirt cannot be removed by a brush**

Obtain some stylus cleaner from your dealer and remove. Do not allow any of the liquid to come into contact with the plastic parts as they may dissolve.

TROUBLESHOOTING

Incorrect operations are often mistaken for trouble and malfunctions. If you think that there is something wrong with your turntable, check out the points below. Sometimes, the trouble may lie in another component. Investigate the stereo amplifier, speaker systems and other electrical apparatus which are being used.

If the trouble cannot be rectified even after exercising the checks listed below, ask your nearest PIONEER authorized service center or your dealer to carry out repair work.

Symptom	Cause	Remedy	Ref. page
Platter does not rotate	• Disconnected power plug	• Connect the power plug securely to the AC outlet.	6
	• When turntable is connected to AC OUTLET (SWITCHED) on stereo amplifier	• Set the amplifier's power switch to ON.	6
No sound	• Faulty output cord connections	• Insert pin plugs firmly into amplifier's PHONO terminals.	6
	• Faulty cartridge lead connections (when the cartridge has been replaced)	• Connect properly.	10, 12
Sound is discontinuous or distorted; noise from scratches is heard	• Incorrect tracking force	• Apply tracking force commensurate with cartridge.	5
	• Excessive anti-skating	• Apply value commensurate with cartridge.	5
	• Dirty stylus	• Clean stylus.	10
	• Worn stylus	• Replace with new stylus.	10
	• Dirt or dust on record	• Clean record.	–
	• Record warp or scratches	• Replace record.	–
	• Dirty pin plugs or amplifier input terminals.	• Clean off dirt.	–
	• Cartridge mounting is bent (when cartridge has been replaced).	• Correct bending.	12
Hum (heard through speakers)	• Faulty output cord or ground wire connection.	• Connect properly to amplifier's PHONO or GND terminal.	6
	• Dirty pin plugs or amplifier input terminals.	• Clean off dirt.	–
	• Adverse effect of flux from amplifier's power transformer.	• Vary positions of amplifier and turntable.	–
Howl (if the volume is turned up during record play, acoustic feedback fills the whole room)	• Vibrations from speakers are being transmitted to the floor and these are being picked up by cartridge.	• Place turntable at a distance from speakers so that vibrations are not transmitted from floor.	–
		• Place turntable on sturdy stand.	–
	• Sound pressure from speakers is transmitted directly to cartridge.	• Try varying installation location of turntable.	–
Odd sound tempo	• SPEED switch is not at correct position.	• Set to position that agrees with record speed.	3.7
No auto lead-in (tonearm does not move with auto play)	• Tonearm is anchored to arm rest.	• Release arm rest.	7
Stylus does not descend at proper position with auto lead-in	• DISC SIZE switch is not at correct position.	• Set switch to position that agrees with record size.	3.7
	• Stylus descent position is not adjusted properly.	• Re-adjust properly.	9

ENGLISH

SPECIFICATIONS

Motor and Turntable

Drive System . . . . . Direct-drive
Motor . . . . . Quartz PLL Hall motor
Turntable Platter . . 310mm diam. aluminum alloy die-cast
Speeds . . . . . 33-1/3 and 45rpm
Wow and Flutter . . . . . Less than *0.012% (WRMS)
0.025% (WRMS)
0.035% (DIN)

Values marked with an " * " designate the wow and flutter for motor, and do not include the cartridge or tonearm load.

Signal-to-Noise-Ratio . . . . . More than 78dB (DIN-B)
(with Pioneer cartridge model PC-3MC)

Tonearm

Type . . . . . Static-balance type, Straight pipe arm
Effective Arm Length 221mm
Overhang 15.5mm
Usable Cartridge Weight . . . . . 3g (min.) to 8g (max.)

Subfunctions

Full auto mechanism, Anti-skating force control, Stylus pressure direct-readout counterweight, Cueing device, Free stop hinges

Miscellaneous

Power Requirements . . . . . AC220 – 240V ~ , 50, 60Hz
Power Consumption 12W
Dimensions . . . . . 420(W) x 108(H) x 367(D)mm
16-1/2(W) x 4-1/4(H) x 14-7/16(D)in.
Weight 5.9kg/13lb

PC-3MC Specifications

Type . . . . . Moving coil type
Stylus . . . . . 0.5mil diamond (PN-3MC)
Output Voltage 2.5mV
(1kHz, 50mm/s Peak velocity, LAT)
Tracking Force . . . . . 1.7g to 2.3g (proper 2g)
Frequency Response . . . . . 10 to 32,000Hz
Recommended Load 50kΩ
Weight 3.1g

Accessories

EP Adapter 1
Operating Instructions 1

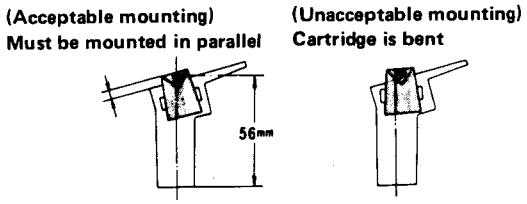
NOTE:
Specifications and design subject to possible modification without notice, due to impromements.

Condensation

When this turntable is brought into a warm room from previously cold surroundings or when the room temperature rises sharply, condensation may form inside and the unit may not do full justice to its performance. In cases like this, allow the unit to stand for about an hour or raise the room temperature gradually.

Cartridge replacement

- Any cartridge besides that supplied having a weight of between 3 and 8 g may be used with this turntable.
- The polarities of the accessory headshell's leads are as shown below. Align them properly.
  Red: Right channel (R)
  Green: Right channel ground (RG)
  White: Left channel (L)
  Blue: Left channel ground (LG)
- The overhang of the tonearm is 15.5 mm.
  When using the accessory headshell, the overhang can be adjusted when the stylus and connector dimensions are set to 56 mm.



- After having replaced the cartridge, refer to page 5 and perform the tracking force and antiskating adjustments again.